2007-08 Idaho 8th Grade Direct Mathematics Assessment

820

MR

STUDENTS DO NOT WRITE IN THIS AREA

FINAL

ROUND 1 T:____ R: ____ *ROUND 2* T:____ R:___

ain how you solved the problems on thi
If you use a calculator, show how you set up the math.

1) Michelle wants to buy a CD player at Marty's Electronics for $87.00, a case for $14.50, b and 4 CD's for $11.00 each.

a) How much will it cost Michelle to buy what she wants at Marty's Electronics, including a 6% sales tax? *Show or explain how you found your answer.*

150.00
9.00
159.00

87.00
14.50
4.50
44.00
150.00

150.00
.06
9.0000

Proficient application of basic skills.

b) If Michelle saves $7.50 a week, how many weeks will it take her to have enough money to buy everything she wants? *Show or explain how you found your answer.*

Well defined structure.

750 | 150.00 → 21.2

21 weeks

c) Michelle receives $30.00 for her birthday. This is what fraction of the total cost? *Show or explain how you found your answer.*

30/150 = 10/53

d) Michelle has a coupon for 15% off her purchases. With this discount, what would her CD player, case, batteries, and 4 CD's cost before sales tax? *Show or explain how you found your answer.*

150.00
.15
75000
15000
22.5000

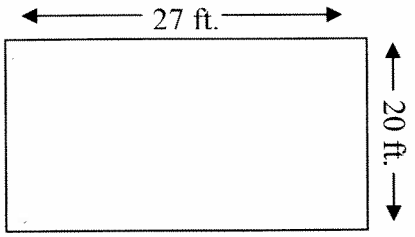
~~150~~ 149.00
22.50
127.50

$127.50

Effective problem-solving strategies.

Read problems 2, 3, 4, and 5 on this and the next two pages.
Select three problems to answer. Answer ALL of the parts of the three problems you select to answer.
Cross out the one problem that you do not choose to answer.

2) Sarah has a garden that is 27 ft. long and 20 ft. wide.



a) What is the perimeter of the garden?
Show or explain how you found your answer.

27
20
540

540ft²

b) What is the area of the garden?
Show or explain how you found your answer.

27
27
20
20
94

94ft²

Limited mathematics vocabulary, use of symbols, and communication skills.

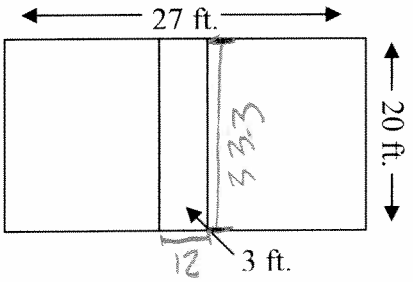
c) Sarah wants to place a block border around the outside edges of her garden. If each block is 6 in. by 6 in., how many blocks will she need to complete the border? *Show or explain how you found your answer.*

450
.06|27

333.3
.06|20

333
450
783

d) Sarah would also like to use the same size blocks to place a path down the center of the garden. The path will be 3 ft. wide. How many total blocks will she need for the border and the path? *Show or explain how you found your answer.*



333
12
345

333.3
.06|2000.0

3) The following table shows scores for students in Mr. Holverson's math class.

Students Test Scores

Name	Test 1	Test 2	Test 3	Test 4
Joe	87	82	90	96
Su-ling	94	89	90	78
Donna	62	74	95	92
Blake	87	79	85	88
Carlos	78	79	85	84

a) Find the **mean** (average), **median**, and **mode** for Test 3. *Show or explain how you found your answers.*

mean 89%

median 90

mode 90/85

b) What is the mean of Joe's four test scores? *Show or explain how you found your answer.*

88.75%

87
82
90
96
355

4 | 355 = 88.75

c) If a fifth test is given, what score must Joe get to have an overall average of at least 90? *Show or explain how you found your answer.*

Adaptable processes.

95%

87
82
90
96
95
450

5 | 450 = 90

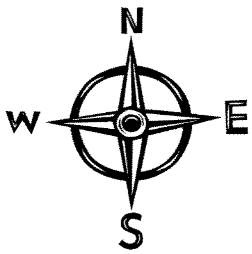
d) Which test was the easiest for the class? How do you know? *Show or explain how you found your answers.*

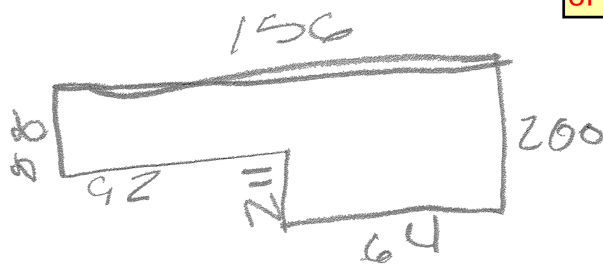
test 3 they all got good grades.

4) Simon and his sister wanted to see how long it would take to walk all the way around the department store parking lot near their home. Starting in one corner of the lot, they walked east for 156 yards. They turned south and walked for 200 yards, then walked 64 yards west. Next they went 112 yards north, 92 yards west, and 88 yards north.

a) Draw a diagram of the path they traveled and label all the distances.

Understanding of situations.





b) How many total **yards** did they walk? How many total **feet** did they walk? *Show or explain how you found your answers.*

yards 712

feet 2136

156
200
64
112
92
88
712

712
× 3
2136

c) If they walked at a constant rate of four feet per second without stopping, how long did their walk take? *Show or explain how you found your answers.*

1/60 · x/100

60·x / 100 ÷ 60

534 min

8.9 ↑
60)534

9hrs

Occasional surface error.

5) Soft drinks come in three sizes at the movie theater: small, medium, and large. The large is twice the size of the medium. The small is 1/3 the size of the large.

a) Let **m** represent the size of the medium drink. Write algebraic expressions in terms of **m** to represent the small and large drinks. *Show or explain how you found your answers.*

b) If the medium drink is 18 ounces, how many ounces will the small drink hold? How many ounces will the large drink hold? *Show or explain how you found your answers.*

c) The small drink costs $1.80. The medium drink costs $2.50. The large drink costs $4.50. What is the cost per ounce for each size? *Show or explain how you found your answers.*